



**Bay de Noc Community College**

**Fall 2018**

## **Western Michigan University Chemistry Curriculum Guide**

**The WMU Department of Chemistry offers a choice of six majors:**

- **Chemistry major** – this 35 credit hour major in the College of Arts & Sciences Liberal Education Curriculum (LEC) is designed for students interested in graduate studies in chemistry;
- **Chemistry major ACS Certified** - this 42 credit hour major is certified by the American Chemical Society and is for students planning to enter the chemical industry, though it may be taken by students planning on graduate school study of chemistry;
- **Biochemistry** - this 36 credit hour major is recommended for students interested in careers in health sciences (medicine, dentistry, nutrition, pharmacology, etc.) or a graduate career in biochemistry or molecular biology;
- **Business-oriented chemistry major** - this 37 credit hour major is available to provide the chemical understanding needed if you are preparing for a career in the chemical industry, outside the laboratory. A minor will be chosen in the Haworth College of Business, and students are prepared to enter areas of management, sales, and some aspects of government service;
- **Geochemistry major** – students choosing this 68 credit major should contact the department of Geosciences as early as possible for advising. The major is designed for students interested in the fields of geochemistry or environmental chemistry;
- **Secondary education chemistry major** - this 34 credit hour major is designed for students who desire to teach high school chemistry. Secondary education majors must meet with a College of Education and Human Development (CEHD) advisor for general education, pre-professional, and professional education requirements. To view the curriculum guide for this major, please go to the list of all major guides and select the chemistry guide listed under “Secondary Education.”

### **Important Information:**

- To ensure that you possess adequate skills in chemistry, you must have had one year of high school chemistry. Otherwise you must enroll in CHEM 1000 (CHEM 090 at Bay) to build up your background in chemistry;
- In addition, chemistry students must meet one of the following math requirements: MATH ACT score of 25 or higher or MATH SAT score of 600 or higher (580 Old SAT), successful completion of MATH 1110 (MATH 105 at Bay) with a grade of a “C” or higher, or place into MATH 1180 (MATH 111 at Bay) or a higher math course;
- All chemistry majors must meet with a chemistry department advisor about major or minor requirements. You must make an advising appointment to declare your major or minor;
- For general education (see below) requirements, you must meet with a College of Arts & Sciences (A & S) advisor;

- All chemistry majors must complete a minor (except geochemistry). Business-oriented chemistry majors will be required to complete a minor in General Business, Management, or Marketing in the Haworth College of Business (HCoB);
- If your major is chemistry, you must complete your last 14 credits hours in the Department of Chemistry at WMU;
- If your minor is chemistry, you must include at least one course that contains a laboratory experience, and your last seven (7) credits must be taken in the Department of Chemistry at WMU.

#### **Courses that can be taken at Bay:**

##### **WMU courses**

CHEM 1100/1110  
 CHEM 1120/1130  
 CHEM 3750/3760  
 CHEM 3770/3780  
 MATH 1220  
 MATH 1230  
 MATH 2720  
 PHYS 2050/2060  
 PHYS 2070/2080

##### **Bay courses**

CHEM 110  
 CHEM 112  
 CHEM 201 (not required for Geochem majors)  
 CHEM 202 (not required for Geochem majors)  
 MATH 141  
 MATH 142  
 MATH 243 (not required for Geochem majors)  
 PHYS 205 (not required for Geochem majors)  
 PHYS 206 (not required for Geochem majors)

##### **Business-oriented majors may take these additional courses:**

BUS 1750	BUSN 160
MKTG 2500	BUSN 253
ACTY 2100	ACCT 101

##### **Biochemistry majors may take these additional courses:**

BIOS 1600	BIOL 202
BIOS 1610	BIOL 112
BIOS 1620	BIOL 110
BIOS 2320	BIOL 226
BIOS 2500	BIOL 255

##### **Geochemistry majors may take these courses:**

**\*\*\*Very important note:** Geochemistry majors only need the following Chemistry courses: CHEM 110, 112, and CHEM 2250/2260 (not available at Bay), and 9 hours of **upper level Chemistry** course-work at WMU. You will also need 11 credits of **Math and General Science** (below) and 9 credits of Geoscience electives (to be taken at WMU):

CHEM 3750/3760	CHEM 201
CHEM 3770/3780	CHEM 202
BIOS 2320	BIOL 226
BIOS 3010	BIOL 270 and 271
MATH 2720	MATH 243
PHYS 2050/2060	PHYS 205
PHYS 2070/2080	PHYS 206

#### **General education requirements:**

- Please see the WMU [general education guide](#) for information on the courses that are required from all students, as part of the graduation requirements at WMU;
- All students graduating from the College of Arts & Sciences must meet the world language proficiency by completing two semesters (6-8 hours) of the same foreign language or American Sign Language, or

passing WMU's proficiency by exam. Please contact the College of Arts & Sciences Undergraduate Advising Office at (269) 387-4366 with any questions. Neither the MACRAO Agreement nor the MTA satisfy the world language requirement.

- If the student's first language is not English, then the student is exempt from this requirement, verified through the WMU departments of Spanish or World Languages and Literatures.

**Contact information:**

**Chemistry department advisors:**

Dr. John Miller  
john.b.miller@wmich.edu  
(269) 387-2871

Dr. Robert Sutton  
robert.e.sutton@wmich.edu  
(269) 387-2834

Dr. Donald Schreiber  
donald.schreiber@wmich.edu  
(269) 387-2856

Chemistry Satellite Office, 2220 Chemistry Building  
<http://wmich.edu/chemistry/advising>, for appointments

**General education advising:**

A & S advisors – 2318 Friedmann Hall  
[wmich.edu/arts-sciences/advising](http://wmich.edu/arts-sciences/advising) or (269) 387-4366

**Business-chemistry**

Paul Hildenbrand - Haworth College of Business  
[paul.hildenbrand@wmich.edu](mailto:paul.hildenbrand@wmich.edu) or (269) 387-5085

**Geochemistry advising:**

Dr. Michelle Kominz - 1187 Rood Hall  
[michelle.kominz@wmich.edu](mailto:michelle.kominz@wmich.edu) or (269) 387-5486